

### V.3.1 INPUT SUMMARY FOR DEFINING OPERATIONS

This Section describes the general form of the input cards needed to define the Operations to be used in a Segment.

Operations must be input in the order they are to be executed. Data values needed by each Operation must have been read from data files or generated by a preceding Operation.

#### Input Summary

The input cards required to define the Operations Table for a Segment are as follows:

<u>Card</u>	<u>Format</u>	<u>Column</u>	<u>Contents</u>
1	A8	1-8	Identifier for the type of Operation. Available Operations and their identifiers are listed in Section V.3.2.
	4X,A8	13-20	User supplied name for the Operation. All blanks and 'INPUT CO' are not allowed. A name is not required for the 'CLEAR-TS' Operation. The combination of the identifier and name must be unique for each Operation within a Segment (the 'CLEAR-TS' Operation is an exception).
	2X,A8	23-30	Name of Operation in the previous definition of the Segment from which carryover values are obtained. Only needed for Operations that have carryover.  This name is only used by the RESEGDEF command of the FCINIT program. The name determines whether the carryover for the Operation is obtained from an Operation of the same type used in the old definition of the Segment (referred to as carryover transfer) or whether the user will supply initial carryover values for the Operation.  Default is carryover obtained from the Operation with the same type and name in the previous definition of the Segment. If an Operation with the same type and name did not exist previously, the default is for the user to supply carryover.

<u>Card</u>	<u>Format</u>	<u>Column</u>	<u>Contents</u>
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If initial carryover values should be obtained from an Operation used in the old definition of the Segment of the same type, but with a different name, enter the old name. Several Operations in the redefined Segment can obtain carryover from a single Operation in the old version of the Segment.

If initial carryover is to be supplied by the user, enter 'INPUT CO'. In this case, there will be no carryover transfer for this Operation.

2			The input cards for the Operation. The cards needed for each Operation are given in the appropriate subsection of Section V.3.3.
3	A4	1-4	'STOP'

Repeat cards 1 and 2 for each Operation in the Segment.

### Sample Input

Sample input to define a Segment is shown in Figure 1.

### Error Messages

The following error messages can be generated when defining Operations.

1. \*\*ERROR\*\* XXXXXXXX IS NOT AN ACCEPTABLE OPERATION IDENTIFIER.  
Action: Check the list of available Operations and identifiers in Section V.3.2.
2. \*\*ERROR\*\* THE P ARRAY IS FULL. THE REST OF THE OPERATIONS IN THIS SEGMENT WILL BE SKIPPED.  
Action: Reduce the number of Operations in the Segment or redimension the P array.
3. \*\*ERROR\*\* THE NAME OF A XXXXXXXX OPERATION IS ALL BLANKS OR 'INPUT CO'. THIS IS NOT ALLOWED.  
Action: Change the Operation name on Card 1, Columns 13-20.
4. \*\*ERROR\*\* AN OPERATION HAS THE SAME TYPE (XXXXXXX) AND THE SAME NAME (XXXXXXX) AS A PREVIOUS OPERATION. THIS OPERATION WILL BE IGNORED.

Action: Assign all Operations of a given type unique names.

5. **\*\*ERROR\*\*** THE OPERATION WROTE BEYOND THE END OF THE P,C, OR T ARRAY. THE REST OF THIS SEGMENT IS IGNORED.

Action: An Operation is not programmed correctly. Call for assistance.

6. **\*\*ERROR\*\*** MORE SPACE IS NEEDED FOR DATA AND WORKING STORAGE IN THE D ARRAY THAN IS AVAILABLE.

Action: Reduce the number of time series or working storage needed or redimension the D array.

7. **\*\*ERROR\*\*** TIME SERIES HAS NOT BEEN DEFINED. I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS.

Action: All time series used by Operations must be defined in the 'DEF-TS' section of the Segment input (see Section V.2.3).

8. **\*\*ERROR\*\*** A TIME SERIES DOES NOT HAVE THE PROPER DIMENSION FOR THIS APPLICATION--DIMENSION SHOULD BE=XXXX. I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS DIM=XXXX.

Action: Check input summary for the Operation in Section V.3.3 to determine what dimensions are allowed.

9. **\*\*ERROR\*\*** A DATA TYPE (XXXX) WHICH CAN CONTAIN MISSING VALUES IS USED FOR AN APPLICATION WHERE MISSING VALUES ARE NOT ALLOWED. I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS.

Action: Use a data type code that cannot contain missing values (see Section V.2.2).

10. **\*\*ERROR\*\*** A DATA TYPE WITH XX VALUES PER TIME INTERVAL IS USED FOR AN APPLICATION WHERE ONLY XX VALUES ARE ALLOWED. TIME SERIES I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS.

Action: Use a data type with the proper number of values per time interval (see Section V.2.2).

11. **\*\*ERROR\*\*** IN THE X ARRAY XXXX POSITIONS WERE REQUESTED, ONLY XX ARE AVAILABLE.

Action: Reduce the number of Operations or redimension the proper array.

12. **\*\*ERROR\*\*** NO VALUES HAVE PREVIOUSLY BEEN ASSIGNED TO THE INPUT TIME SERIES (I.D.=XXXXXXXX TYPE=XXXX DT=XX HOURS) FOR THIS OPERATION.

Action: All input time series for an Operation must contain data values. Values can be obtained by reading from disk as in the case of 'INPUT' or 'UPDATE' time series or from previous Operations in the Segment. Thus, the problem can be corrected by: reading the values from disk, adding an

Operations or rearranging the Operations Table.

Error messages for specific Operations are described in the appropriate sub-sections of Section V.3.3.

Figure 1. Sample Input for a Segment

- Column -

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      5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80
-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
IDENTIFIER  GLMSW          39.27   108.91
TITLE      CALCASIEU R-GLENMORA
UPSTREAM
DOWNSTREAM  GLFSW
DEF-TS
GLMSW      MAP          6          INPUT
GLMSW      MAP
GLMSW      INFW         6
GLMSW      MAPE        24          INPUT
GLMSW      MAPE
GLMSW      STG          6          INPUT
GLMSW      STG
GLMSW      SQIN         6
GLMSW      QIN          6
GLMSW      SSTG         6          OUTPUT
GLMSW      SSTG        39.27   108.91   CALCASIEU R-GLENMORA
GLMSW      QINE         6          OUTPUT
GLMSW      QINE        39.27   108.91   CALCASIEU R-GLENMORA
END
SAC-SMA     GLMSW
SWTRIB1 @ GLENMORA          6  GLMSW  MAP      GLMSW  INFW
                                0      SUMS      0      0
                                1.0001.050 50.0 30.00.3300.0050.0500.012 00.100
                                80.0 3.00 200. 30.0 40.0.170.00600.1500.300 0.10
      GLMSW  MAPE          1.001.001.001.101.301.401.501.401.301.101.101.00
                                50.0 0.0 200. 1.6 32. 250. 0
UNIT-HG     GLMSW
CALCASIEU R-GLENMORA          620. 17          ENGL      0.000
      GLMSW  INFW         6  GLMSW  SQIN         6
          982. 1849. 2848. 4112. 5647. 7775. 8367.
          7696. 6503. 5638. 4010. 3518. 3014. 2213.
          1345. 808. 210.
CHANLOSS    GLMSW
CALCASIEU R-GLENMORA          0.0          30. NOPE
GLMSW      SQIN         6
1.0
1.52 2.03 2.79 3.56 4.57 4.57 4.32 4.06 3.81 3.30 2.29 1.52
STAGE-Q     STAGE
STG TO QIN - GLMSW          GLMSW          1
      GLMSW  STG         6  GLMSW  QIN         6
ADJUST-Q    GLMSW
CALCASIEU R-GLENMORA          1  0  0
GLMSW      QIN         6
GLMSW      SQIN         6
GLMSW      QINE
120
0
STAGE-Q     FLOW
QINE TO SSTG - GLMSW  GLMSW          2
      GLMSW  SSTG         6  GLMSW  QINE         6
PLOT-TUL    GLMSW
1  0 101 0 200 6 6 5 3 I - 0 0
25 25 F U M GLMSW
MAP  ADJ-Q  STAGE
GLMSW  MAP  LIST          F5.2, 6 MEAN AREAL PCPN
GLMSW  QIN  PLOT 0          6 OBSERVED FLOW
GLMSW  QINE BOTH A          F8.0, 6 ADJUSTED FLOW
GLMSW  SSTG LIST          F8.1, 6 FORECAST STAGE
GLMSW  SQIN PLOT S          6 SIMULATED FLOW
END
STOP

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